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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,857	12/29/2005	Guojun Dai	09877.0364	6423

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EXAMINER	
HOFFMANN, JOHN M	

ART UNIT	PAPER NUMBER
1791	

MAIL DATE	DELIVERY MODE
03/26/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,857	DAI ET AL.	
	Examiner	Art Unit	
	John Hoffmann	1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *15-28* is/are pending in the application.

4a) Of the above claim(s) *25-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *15-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Oath/Declaration

The declaration filed 25 January 2007 is defective.

The oath or declaration is defective because:
The specification to which the oath or declaration is directed has not been adequately identified. See MPEP § 602.

The declaration refers to two specifications. Examiner understands that a proper declaration must be directed to a single specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear if claim 21 is cancelled, because the text is still present and because claim 24 depends on claim 21.

Double Patenting

Applicant is advised that should claim15 be found allowable, claim 21 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing

one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Although claim 21 has a label of being "canceled" the text of the claim remains – suggesting it has not been cancelled.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 15-22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobsen WO 03/078338 in view of Fogliani 2004/0237585.

Jakobsen teaches the invention as claimed, except for the density. See Jakobsen page 39, lines 12-23 as well as figure 5. However Jakobsen does not teach the density. Fogaliani teaches at [0008] that the density should be between 0.6 and 0.8 g/cc, or else it will be too soft and tends to break, or if it is of a higher density, there will be too much high hardness and air bubbles will remain. It would have been obvious to perform the Jakobsen method so that soot density is between .6 and 0.8 g/cc so as to avoid the problems associated with densities outside the range - as taught by Jakobsen.

Claim 16 requires a maximum variation of 4 %. Examiner assumes that it means that the maximum variation can be no higher than 4% - but it does not actually require such a variation. Fogaliani teaches that is known to keep variations down to 0.5% (see

[0014]) and to control the density so as to prevent risks of cracking, cleavage and bubbles [0016], and that the density can be "precisely controlled" [0017]. It would have been obvious to control the density variation down to 0.5%, since such is achievable and so as to prevent bubbles, cracks and cleavage.

Claim 17 See the "5th aspect" starting on page13 of Jakobsen. The "sintering" anticipates the claimed consolidation.

Claim 18: See Jakobsen, page 14, lines 28-30. Examiner expects applicant's "dehydrafion" (sic) would be interpreted as "dehydration" by one of ordinary skill in the art.

Claims 19-20: See Jakobsen, page14, lines 20-22.

Claim 22: [0009] of Jakobsen indicates that 0.6-0.7 is the preferred range, thus it would have been obvious to have the class with in the range since such is preferred. Alternatively: it would have been obvious to perform routine experimentation to determine the optimal density – depending upon the exact composition and the processing steps used, since Jakobsen teaches it is a result effective variable which effects strength and bubbles.

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jakobsen WO 03/078338 in view of Fogliani 2004/0237585 as applied to claim 15 above, and further in view of Ito 5196383.

Jakobsen teaches the use of solgel bodies (e.g. page 39, lines 25-35), but not the density. As per figure 1 of Ito, densities in the 0.5-0.7 are achievable with sol gel bodies. It would have been obvious to perform the Jakobsen process with a density in the 0.6-0.7 range, since Fogliani teaches that such a density is an optimal density for porous glass bodies. Alternatively, since Fogliani teaches that density is a result-effective variable, it would have been obvious to perform routine experimentation to determine the optimal density in the Jakobseon solgel body.

Response to Arguments

Applicant's arguments filed 2/2/2010 have been fully considered but they are not persuasive.

The comments regarding the Declaration are noted, but they do not appear to be very relevant. Applicant has not pointed out any error in the objection. Applicant argues that 37 CFR 1.497(a) and (b) and 35 USC 371 were complied with. Does not appear to be very relevant: there are many requirements that must be fulfilled prior to the granting of a patent. That declaration identifies the application by international application number and filing date. 37 CFR 1.63 clearly requires that the declaration identify the application. To put it another way. the Declaration uses “and/or” between the two specifications that the inventors have "reviewed and understand" - the or signifies they might have read only one - but there is no indication as to which one. Thus the application/specification has not been identified as required by 37 CFR 1.63. Applicant is encouraged to use approved forms downloaded from www.uspto.gov. In

this case PTO/SB/01 - which uses "or" to signify applicant is suppose declare they have reviewed and understand but a single specification. It is noted that applicant's failure to indicate which (single) application/specification applicant reviewed and understands could result in the Office publishing the incorrect specification.

Applicant's arguments with respect to the prior art have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Thursday, roughly 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

John Hoffmann
Primary Examiner
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